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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 09/581,885 | 09/14/2000 | Jukka Jakara | 3229-4003 | 7120 |
| 27123 | 7590 | 09/17/2004 | EXAMINER | |
| MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101 | | | ALVO, MARC S | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1731 | |

DATE MAILED: 09/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/581,885

Applicant(s)

JAKARA ET AL

Examiner

Steve Alvo

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-7 and 9-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-7 and 9-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____

- 5) ☐ Notice of Informal Patent Application (PTO-152)

- 6) ☒ Other: Advisory of 1-7-2004 withdrawn.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 5, 7, 10-13 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 480 469 with or without LINSTEN et al (6,007,678) with or without JOACHIMIDES et al (5,129,987).

EP 0 480 469 teaches a method of bleaching a chemical pulp (organosolv and kraft, see page 5) in a plurality of different steps wherein at least one bleach solution contains a peracid e.g. peracetic acid (page 5, lines 20-25) where the peracid stage is the last step (page 5, lines 48-50) to obtain a pulp brightness of 88% ISO in the bleaching sequence (O-Z-P_A). See EP 0 480 469, page 6, lines 9-11 for a peracid pH of 2 to about 6. Obviously in the O-Z-P_A sequence the kappa number would be 2.0 after the O-Z-stages and prior to the P_A stage as such is taught by EP 0 480 469 in Example 22, see Table. If the use of such a low kappa number prior to the peracid stage of EP 0 480 469, then LINSTEN et al teaches peracid bleaching of chemical pulps having a kappa number as low as 2.0 (column 5, lines 24-30). It would have been obviously that the post-bleaching stage of EP 0 480 469 could use a chemical pulp having a kappa number as low as 2.0 as taught by LINSTEN et al. The instant specification defines "post bleaching" as "the last step of the bleaching process", see instant specification, page 3, lines 11-16. This does not define over the final per compound bleaching stage of EP 0 480 469. See EP 0 480 469, page 6, lines 32-36, for using 0.5% to about 4% (w/w) peroxy compound on oven dry pulp which reads on the 0.1 to 7 kg/tp of claim 4. See EP 0 480 469, page 7, lines 29-30, for using magnesium sulfate in

the peracid bleaching stage. Claims 10 and 11 are rejected as the bleach plant is part of the paper mill. The purpose of bleaching is to turn colorless the chromophoric groups in the pulp, besides the peracid of EP 0 480 469 would act on the pulp in the same manner as the claimed peracid as it is the same chemical reacting with the same starting material, e.g. chemical pulp. If necessary, JOACHIMIDES et al teaches (column 3, lines 18-21) that the last bleach stage is performed in a post bleaching tower. It would have been obvious to perform the last bleach stage of in a post bleaching tower as taught by JOACHIMIDES et al

Claims 6 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 480 469 with or without LINSTEN et al (6,007,678) with or without JOACHIMIDES et al (5,129,987) as applied to claim 1 above, and further in view of FOSSUM et al.

FOSSUM et al teaches the alternativeness of using alkaline earth sulfates and carbonates as a complex builder (chelating agent) or stabilizer in per acid bleaching. It would have been obvious to substitute the carbonate complex builder of FOSSUM et al for the sulphate complex builder of EP 0 480 469 as their alternativeness is taught by FOSSUM et al. It would have been obvious to use the calcium salt (calcium carbonate) rather than the magnesium salt (Magnesium carbonate) as they are both alkaline earth metals and would be expected to be chemical equivalents.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over LINSTEN et al (6,007,678) with or without JOACHIMIDES et al (5,129,987) as applied to claim 1 above, and further in view of ALI (5,656,130).

If necessary, ALI teaches that in multi-stage bleach sequences inorganic peroxy acid salts could further brighten (GEB values 85 to 93) the bleached (column 12, lines 36-41 and column

13, lines 28-31) by converting any of the remaining chromophoric groups to colorless derivatives. It would have been obvious to one of ordinary skill in the art that the final per compound bleaching stage of HEBBEL, which bleaches to a brightness of over 85%, would be turning chromophoric groups in the pulp to colorless derivatives as such is taught by ALI.

Claims 9, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 480 469 with or without LINSTEN et al (6,007,678) with or without JOACHIMIDES et al (5,129,987) with or without ALI (5,656,130) as applied to claim 17 above, and further in view of SHELDON (2,822,236).

Claims 9, 18 and 19 call for separate bleachings in a bleaching plant and a post-bleaching step, outside the bleach plant. SHELDON et al teaches that peroxide, one of the disclosed alternative per compound bleaching agents of EP 0 480 469, could be used to bleach bleached chemical pulp, before during or after the drying the pulp just prior to storage or shipment. It would have been obvious to have the final post bleaching stage of EP 0 480 469 outside the bleach plant, e.g. during or after drying or just prior to storage or shipping, in the manner taught by SHELDON.

Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12 does not further limit claim 2 from which it depends and is thus improper.

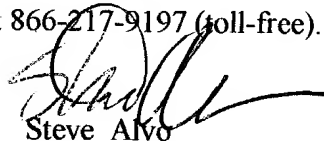
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Alvo whose telephone number is 571-272-1185. The examiner can normally be reached on 5:45 AM - 2:15 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Steve Alvo
Primary Examiner
Art Unit 1731

msa